# Simple Ground Equipment & services milestones



**Simple Ground Equipment & Services**

Low tech ground services

Simple Ground Equipment & Services displays static objects around your aircraft on the ground

Aérographe

## VERSION 8

Version 8 has now chocks that actually retain the aircraft



## VERSION 10

So far for the version 10 I have improved the handling of jumbo jets like the Boeing 747. The handling is adaptative, without the user knowing. You'll discover more details as you use the loading equipment.

On top of that, Mr Sparks B744 and SSG B748 have now both a preset. I also added presets for the E170-E195 range of Embraer aircraft and a baggage cart.
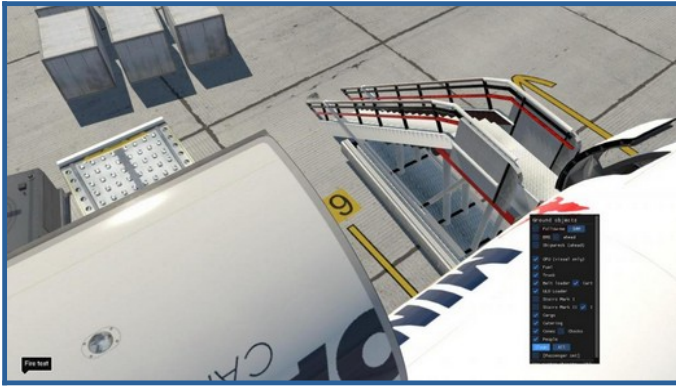


## VERSION 11

Version 11 : active deicing services with low OAT for 45 minutes of ice-free airframe as effect of the deicing fluid after application.

v11.2 is only a small addition compared to 11.1 : I added the preset for the Cessna 140.

## VERSION 12

Version 12 : I have made an alternative stairs object, available for A3xx and B7xx aircraft types. These object is called stairs Mk III in the menu.

## VERSION 13

Version 13 is compatible with the Airbus A3ST Beluga

## VERSION 14

Version 14 : A3ST Beluga chocks corrected, Follow-me path reworked slightly, chocks loading position function redone, embryonic vocal marshaller function to designate a point on the ground behind the follow-me, as a fall back if your stand doesn't already have a marshaller.

## VERSION 15

Version 15 : an actual marshaller. Sometimes for an unexpected nor elucidated reason, I don't get the SAM or the Autogate marshaller. This is (above in the post) my backup mechanism to avoid switching in outside view to correctly park the aircraft.



## VERSION 16 & 17

Version 16-17 : A new simple push-back will make its appearance. A new simple push-back will make its appearance also in the next version :

I also had to customize the Beluga push-back, because the flight deck is very low above the earth.  The vehicle switch to support the Beluga will be fully automatic, without user intervention. Version 17 is a repackaging of the correct files on my side.

## VERSION 23

Version 23 has wild/industrial fires.

## VERSION 27

Major Version 27 fixes the detection of the add-on "SAM Worldjetways XP" (there was a coding error). That should improves on many users reporting the script was not working. Both the main script and the configuration file have changed. Also added : customization for the Q400 and Saab 340 aircraft types.

## VERSION 28

Minor version 28 has some customization for the Concorde. Both the main script and the configuration file have changed.



## VERSION 29

Minor version 29 adds some customization for the ToLiSs A340-600. Both the main script and the configuration file have changed.

## VERSION 30

Minor version 30 adds some customization for the ToLiSs A340-600 converter to Freighter ("Preighter"). ONLY the main script has changed. The user config file hasn't changed since version 29.

## VERSION 31

- Major Version 31 makes the marshaller more efficient when requesting an automatic determination of stand position, and use more efficiently the custom scenery stand positions (provided the user has compiled his own cache in SNLE) and the global scenery stand positions.
- A togable 3D arrow can indicate more blatantly the targeted stand position.
- A second airstair is now also available, at the moment only for the A340-600 2L door.

## VERISON 32

- Major Version 32  A second airstair is now also available for the 319/321/742/752/753.
- The CR700 by ADSimulations configuration has been added.



## VERSION 33 New Generation

- A second airstair is now also available for the Inibuilds A310. A310 customization added.
- The A340-600 configuration has been fixed.
- The user configuration file has been split between aircraft preset and vehicles customization file
- MisterX library assets now integrated by default, including a follow-me car, yet the reversion to X-Plane 11 objects is still available.
- Custom airstair 3D model changes

- lots of code change, hopefully I didn't introduce too much bugs.

## VERSION 35

Version 35 has now the LevelUp B736/737/738/739/739ER compatibility



## VERSION 36

Bug fix (the marshaller stopped guiding the aircraft on stand after version 34).

## VERSION 37

- arrestor cable or net barrier dynamic objects

- Active trapping (when aircraft ground speed is more than 20 knots)

- Active trapping thanks to the cable with the tailhook down

- After trapping, either with the cable or with the net, the FireServices are shown automatically

- The nearest ILS-equipped runway-end is equipped when the user selects the Arresting system in the SNLE menu.

- If the user continues to fly, the barrier or cable installation jumps automatically to the new nearest runway end.

- Uses the ILS navaid to gather the runway course and location (Limitation : at this time, only ILS equipped runway can have it). We use the navigation data, not the scenery

## VERSION 38

And now in version 38, several code changes for housekeeping and to support the Shareware Metroliner III AC package from @Starving pilot and the FACO F-15

## VERSION 41

- Panavia Tornado, T-2 Buckeye, X-Bureau A318 now added in the aircraft preference files



- Solved conflict with SAM jetways which prevented user without the addon to be able to dispatch the passenger bus. Totally removed SAM jetways interaction code.

## VERSION 43

- EMAS  Engineered materials arrest or system, modelised in  3D

- EMAS is now default arresting system

- Aircraft configuration adjusted for the EV55 Evektor (freeware) and the Challenger 650.


## VERSION 44

- two files changed : main script and vehicle configuration file amended to add a backbone to support the Challenger 650 HD deicing vehicle instead of the Paul Mort deicing truck in low definition, only for people who happen to be Hot Start customers and have the CL650 installed (because we only link to the files on the hard drive and we certainly do not provide them).

The user may review his vehicle configuration file in a text editor to activate the deicing truck by un-commenting the reference to the Challenger directory in X-Plane.


## VERSION 45

Many changes :
- 3D model of the follow me car updated, as permitted per licence of the original model. Credits : original model of a car by MisterX.
- better integration with ToLiss : calling the GPU now activates the ToLiss GPU for the A319, A321 and A346. Chocks will display and remove ToLiSs native chocks. 3D models for the Air start Unit and Air Conditioning unit will appear in the A319 and the A321 (not the A346) if triggered from the ToLiSs ISCS.
- less occurrences of the Marshaller not finding a parking stand in "auto" mode because "too far" of the user aircraft
- basic MD11 compatibility  (only tested with Overland MD-11 FSX conversion) by zckerby

## VERSION 48

- B727-100 and B727-200 ground handling set customized, including chocks



- SGES menu is back to hidden by default

- ASU position is repaired

• New airstairs models created



• several vehicles reworked with reflections
• night lighting of the vehicles updated
• new animated 3D model for the active deicing services built on a MrX library asset
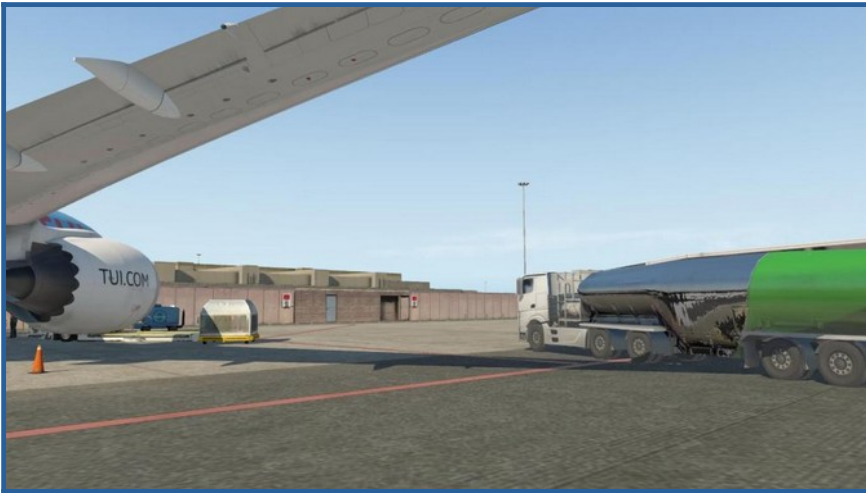


• update of the MrX Belt loader model for a more accurate one
• adjusted parameters for the A350/E170/E195/MD11
• Boeing 787-8 and Boeing 787-9 added
• Airstair code slightly tuned

## VERSION 50.1

• New fuel truck (3D model)



• simulator pause handled
• New ULD cart train (3D model) for freighter aircraft



• Updated bush fire (object was missing and is also redone)
• Updated ships models (Wreckage site for helicopters)
• Start of code optimisation with structural changes to pave the way into the future
 • New animated passengers (3D models) actually boarding from the bus to the forward or the aft airstairs.
• Many and various 3D models and code changes.
• Automatic 18 minutes sequence if user requested.
• Flight Factor A320 airstair support added
• JustFlight BAe-146 embedded airstairs toggle added in our menu

## VERSION 51 (major)

- PRM boading truck was missing. The European Union Persons with Reduced Mobility (PRM) legislation is intended to ensure that Persons with Reduced Mobility traveling via public transport should have equal access to travel as compared to travelers with unrestricted mobility.
- new animation and code for catering truck
- one new passenger added, and boarding loop rewritten
- passenger are avoiding the wing cone when walking to an aft boarding stairs
- structural code rework : around 780 lines less than in the previous version of the code.
- soft engine sounds (can be deactivated in the vehicles parameters file if one doesn't like it)
- new custom definitions for the A330-200 and A330-300, DH8-100, DH8C (Q300), IL-96, B777-X, B707-300
- Avro RJ handled on top of the older BAe-146s.
- Second airstair added on B763 and B762 models
- PDF manual updated to follow the above changes

## VERSION 52

- New detachable and movable window for the menu
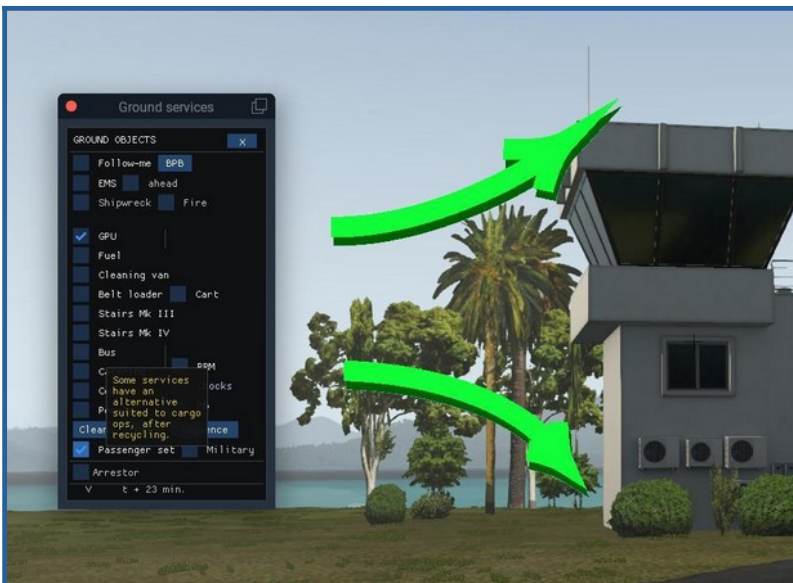


- [BUGFIX] Arrestor system not reloading : fixed
- [BUGFIX] Conflict with JustFlight BAe-146 Speedy Copilot edition : fixed
- Arrestor system : added sound when catching the wire
- Cargo services : ULD Loader selection ergonomics improved, to be able to deselect it even when the user has back-selected the passengers ground services
- Reworked organisation of the menu

## VERSION 52.1

- [BUGFIX] The marshaller was not giving stopping instructions any more. Less than ideal. I punished him and sent him back to the training course.

Latest versions from V49 to v52 have seen have seen many many dramatic changes in the code. Please help report any FlyWithLua bug in the comments if any.

## VERSION 53

 • New : Deboarding passengers (first rough version)



 • B767-200F and SF added in the aircraft configuration files

 • Optional automatic stairs (page 6 of the manual), when you open the 1L door, the stairs can appear automatically. Disabled by default, it can be enabled durably in the vehicle config file or temporary in the GUI. [User request]

## VERSION 54

The version 54 is a minor update to polish the product, and brings a new ground service vehicle (the rear bagage loader).

 • New : added the rear belt conveyor of ULD loader, in a stand-by position near the aircraft fuselage. [User request]



 • New : added Felis Boeing 747-200 door support, recently added as a model update (door opening and closing) by Felis

 • [BUGFIX] Adjusted user switch to the rear airstairs for deboarding passengers, in order to prevent erroneous passengers deboarding from the center of the airplane.

- [BUGFIX] PRM truck with business jets was incorrectly displayed
- [POLISH] Minor graphical menu improvements
- [POLISH] Housekeeping and tiny small changes in the code for a better product

## Version 55 (2022-08-28)

- Extension of the BAe-146 fine-tuning code, it allows the bagage cart to show up and drive to the aircraft.
- New follow-me vehicles and EMS with permission from @Highbrow
- New bagage cart with a human character
- Adjustment to the CH-47 Chinook code to allow the Push back truck to show correctly
- New vehicles set : military fleet added for all users

## Version 56 (2022-09-09)

- Startup options (in a text file), including automatically set the chocks as soon as we load our plane
- **X-Plane 12 default fleet added** (A330, MD82,RV10,C750,SR22,R22...)
- X-Plane 12 default ground vehicles support / backward compatibility with X-Plane 11
- Move and relocate the SGES window during the session
- Rotate MD-88 definitions improved
- This version was crafted in X-Plane 12 beta, but with the Flywithlua for X-Plane 11.

## Version 57 (2022-09-13), for helicopters lovers

- Shipwreck site adjusted to take into account the beautiful X-Plane 12 boats
- Sentosa Leader ro-ro ship PBR texture reworked for more compatibility with X-Plane 12
- **Integrated the carrier and frigate controls** in X-Plane 11 inside the SGES window : you can pop those active boats on accurate world coordinates, or in front of the airplane as you like, and land on it.
- Integrated some carrier and frigate controls in X-Plane 12 inside the SGES window : you can create static objects representing the carrier or the frigate in X-Plane 12. Things have changed in this department between X-Plane 11 and X-Plane 12, that's the best I could do.
- New PDF manual for the boats features has been written and added in the expanded documentation folder.
- Backward compatibility with X-Plane 11

## Version 58 (2022-09-26)

- Housekeeping : cleared unimportant errors reported in the log, cleaned log outputs.
- Adding XP12 jetways control by button when chocks are set, directly in SGES
- Checked compatibility with XP12 Zibo 738
- Added compatibility with Thranda Cessna U206
- Adjusted shipwreck generation (modification of the wet terrain check logic)
- Adjusted engine sound generation (sound loop logic added)
- SGES was causing a crash to desktop at X-Plane 12 startup, solved by the introduction of a start delay of 60 seconds, then the scripts loads up.
- The runway cache generation was causing a flywithlua crash, solved by locating the new X-Plane 12 global airport definition.
- The runway cache generation was not looking for all runways on the earth, as especially seen in XP12 due to the global airport definition format, solved by reworking our data filters.
- Reincorporated a marshaller object which was missing in the archive offered for download
- Backward compatibility tested with X-Plane 11 and flywithlua 2.7
- Tested in XP12 with flywithlua 2.8.

## Version 58.2 (2022-10-21)

- Changed almost all 3D objects for **a better night lighting under X-Plane 12**. Existing mechanism for XP11 was too bright in XP12. (tested)
- Backward compatibility of the night lighting with X-Plane 11. (tested)
- Introduced a 3D object : a new cart

## Version 59 (2022-10-23) : ease X-Plane 12 carrier ops

- Severely tweaked the push-back part of Simple and Nice Ground Equipment (XP11 + XP12)
- **Made the push-back possible on the simulator CVN-78 aircraft carrier** in XP12 (XP12 only), including on flight deck, elevators, and below deck aviation hangar. It has never been so easy to move on the aircraft carrier !
- Introduced a cheat button to apply a single short push backward (XP11 + XP12) when military ground set is ticked.
- Carrier aircraft handling officer (yellow dog) (XP11 + XP12) when military ground set is ticked.
- **Introduced another new 3D object : a small push-back tractor** (note : two tractors can be used depending on the aircraft size) (XP11 + XP12)
- F-4, F-14, F-16 aircraft set refined, F-19 added, checked the A300-600ST Beluga (lowered deck) compatibility with the new push-back cart.

## Version 59.1 (2022-10-25) : compatibility with XP12.00 beta 8 and introducing electrical plane support

- In X-Plane 12, changed the Center of Gravity reference (used for the carrier pushback truck) "sim/flightmodel/misc/cgz_ref_to_default" to "sim/flightmodel2/misc/cg_offset_z", as X-Plane 12 beta 8 warned it was a deprecated dataref. X-Plane 11 keeps the older dataref.
- Compatibility with the VTOL ALIA (in X-Plane 12) electric plane.
- Allows to trigger ON all batteries on the ALIA electric plane, to circumvent a Laminar Research bug.
- **Allows the SGES GPU to recharge the aircraft batteries.**

## Version 59.2 (2022-11-13)

- Increased the script startup delay, necessary in XP12
- Added finer support for the REP package items for the Laminar Cessna 172 (tie-down and chocks supported)
- **Added the canoe boat**, when you are floating on the sea you can popup a small raft in the vicinity

- In the options configuration file, to avoid confusing new users, restored chocks OFF by default

## Version 60 (2022-11-28)

- **Added automatic pushback** in X-Plane 12 beta 14 (eases the life of GNU/Linux users because Better Pushback isn't available for XP12 now) - XP12 exclusive feature



- Added Pushback manual for SGES 60
- **Added communication sounds for marshaller and automatic pushback** via wav sound files (eases the life of GNU/Linux users)

## Version 60.1 2022-12-04  Minor update

- Added special code to support the LAMA helicopter (PhilipU SA 315B Lama XP12) and minor code housekeeping.

## Version 61 (2022-12-18)

- New helicopters **sling load (attach and detach) controls** in the User Interface (by buttons).
- **Anti-ice fluid tuned** for X-Plane 12
- **More passengers** !
- **Passengers boarding and deboarding via all available stairs**, ie if you can have two airstairs, passengers will use both at the same time. (Days have gone into testing this !) - Was a user request.

- Medium **pushback tug has now a driver** and night effects.
- A new ground vehicle as been added. Freighter aircraft have a new option in the menu. **An optional forklift can be used at the tail of the aircraft**. A rear loading ramp plane like the Antonov-12 and the C-130 can benefit from that.
- Several 3D objects additions or modifications.
- Automatic recognition of small aircraft has GA aircraft. **Small aircraft will be offered the reduced ground service for all** and not the full airliner services, **even if not customized** in the Aircraft option file. That avoids fiddling with config files for all the General Aviation models that can be found on earth.
- Checked compatibility with the Antonov-12.
- Added DC-3 and C-47 customization.



- Air Start Unit position tweaked to avoid conflict with B707 / B720 engine cowlings.
- Prevent the option "Canoe" to appear in the menu when not on the sea.
- Effectiveness of "Clean" (to clean all services) and "All" (to display all services) adjusted to include chocks, but to exclude forklifts.
- **Considerable regression tests and quality checks were made**, version 61 is a major release.

- Flywith Lua NG+ was updated (see the download link), I advise anybody using XP12 to update FlyWithLua. Therefore the script start delay was reduced to 40 to 30 units now. But it was nevertheless kept only for compatibility with XP12 users who would still not have updated FWLNG+ to the latest version.

*Remarks*

1. As always the options offered in the GUI are variable, depending on your aircraft type.

2. Small variations may occur in the vehicles arriving to the aircraft, depending on several parameters.

3. Don't forget to recreate the scenery cache, only if you use the marshaller or the arresting system.

## Version 61.1 2022-12-18  Minor update

- Solved Cold & Dark bug « dataref : wrong reference to cabin door 2L »

## Version 61.2 2022-12-31  Minor update

- User request to have an ULD loader in front of the Boeing 747-8F



## Version 61.3 2023-01-02 - Minor update

- Adjusted passenger the deboarding path to the bus to take into account the cones, to avoid the engine of 4 engine aircraft. Switch ON and OFF the traffic cones as required to adjust the passengers path on deboarding as well as boarding.
- Adapted baggages cart to B707 derivatives
- Tuned B747-8 aft stairs and adjusted consequences on code.
- Two bus can now arrive at the same time for big airliners

## Version 61.4 2023-01-03 - Bug fix

- (Emergency option to escape the custom scenery folder in the scenery cache building. Set that in *Simple_Ground_Equipment_and_Services_CONFIG_options.lua* only if FlyWithLua crashes at this steps otherwise it doesn't make sense).
- **Bug fix for the Airbus A321 door (ToLiSs) rear left door.** Now it opens with the passengers active. Found by serendipity when tweaking Speedy Copilot for ToLiSs. Healed both scripts. Now they are vaccinated.

## Version 61.5 2023-01-05 - Bug fix

- Compatibility with Concorde V3
- Bug fix [.acf missing gear information - flywithlua gear1Zm crash]
- Bug fix [rear aircraft chocks not displayed correctly]
- Bug fix [tried to reference rear aircraft door when none defined - flywithlua crash]
- Bug fix [dual passengers bus now truly only for the longest airliners]

## Version 61.6 2023-01-07 - Minor update exclusive to X-Plane 12.01b1 (build 120100)

- One of the things that used to not work in X-Plane 12.00 was the placement of dynamic aircraft carrier and frigate. That worked in XP11.55. This does not yet work perfectly, and has required developing and finding yet another workaround for X-Plane 12, but at least now we can have the dynamic ships like XP11.55.



- Static carrier or frigate function for XP12 stays, it has been developed, I keep that untouched even with the arrival of the dynamic ships. The button is shared between the static objects and the dynamic boats in XP12.
- For X-Plane 12.01b1 (build 120100)

## Version 61.7 2023-02-15 Minor update exclusive to X-Plane 12.03

- The traffic cones have been changed in X-Plane 12.03, I had to point Simple Ground Equipment and Services to the new 3D asset. Legacy in XP11.55 and XP12.00 still compatible.

- Automatic boarding sequence : when boarding is complete, no more repetitive audio messages about passenger boarding complete.
- Supports X-Plane 12.03 (and previous versions)

## Version 61.8 2023-03-22 - Minor update

- Automatic 18 minutes boarding "Sequence" reworked with cosmetic improvement (better readability in the menu) and usability improvements (now the airstairs can be removed manually in favor of the connected jetway).
- Adjustments for the **ToLiss A320 Neo** (benefiting to all potential X-Plane A20N) : aircraft set defined
- New 3D object, a variant of the airstairs with a slight "ToLiss-blue" color touch, limited for when the A320 Neo is the current aircraft.
- A ToLiss "ISCS" button has been added to our window, to open the interactive control menu of ToLiss aircraft from our own menu.
- Housekeeping of the code to allow our 3D models of Air start unit and Air conditioning unit to be better displayed with ToLiss aircraft as soon as the GPU is visible.
- Second Indochina war "Yankee Station", Tonkin Gulf, coordinates available (commented out) in the options configuration file for the carrier relocation
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## Version 62 2023-03-24

Tested in XP12.04 and XP11.55

- **Carrier and frigate management redone** : all our location presets are now intuitively available directly in-game without opening a configuration file in a text editor.
- Dynamic carrier and frigate controls separated from the static carrier or frigate control (XP12 only).
- The manual for the boats (PDF in the documentation folder) has been fully rewritten with the current features and interface.
- For rare users with a custom scenery crashing our parking and runway cache building, **the option to built the cache while skipping the custom scenery folder is now intuitively available directly in-game** without opening a configuration file in a text editor. This is in the FlyWithLua drop-down menu. This is NOT the normal procedure.
- The custom scenery cache building has now **a higher level of log** in the X-Plane log file, authorizing to debug easily & pinpoint a problematic scenery.

- The wind direction dataref has evolved in XP12.04. If the new dataref is detected we use it, otherwise we use the legacy dataref to orient our ships into the wind.

## Version 62.1 2023-04-01

- Basis for **new vehicle animations** (at the moment only enabled with the passenger bus). From now on, the bus will roll before disappearing instead of just disappearing.
- The A320 Neo rear bagage loader location adjusted
- Epic Victory added as supported aircraft

## Version 62.2 2023-04-07

- **New vehicle animations**. The passenger bus plus the fuel truck, bagage cart and pushback truck will roll before disappearing instead of just disappearing.



## Version 62.3 2023-04-08

- Allowing **a better mix between various military and civilian assets at the same time**. Allowing to mix the civilian vehicles, the default military set, and the optional military set (see the manual to unlock it) at the same time. Animations adjusted under the hood.

## Version 62.4 2023-04-13 minor update

- CRJ-900 now supported, modifications for the CRJ jets by Deltawing Simulations and AD Simulation
- The Epic VIctory (added in v62.1) by Aerobask now classified as business jet, in order to get specific support vehicles

## Version 62.4b 2023-04-15 important update. Recommended version.

- 62.4b passed extensive **quality control (X-Plane 12.04 was used)** with various aircraft types and situations over land and over sea.
- Some corrections all over the code. Tailoring stuff.